The Impact and Measures of Stablecoins on the World

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Abstract. Recently, stablecoins, as the latest developing form of cryptocurrency, keep their value stable through binding with legal tender or specific assets. According to Coin Market Cap statistics, the total market value of stablecoins has surmounted 150 million US dollars by 2025 and occupied 15%-20% of the total market value of cryptocurrency, which is around 8-10 trillion US dollars, rapidly becoming the core tools of the cryptocurrency market. However, because of the large-scale use of stablecoins causes the risk of sovereign currency substitution and money laundering, the risk of consumers' rights protection, the risk of uncontrolled monetary policy and a series of problems at the same time. This research aims to systematically sort out the potential influence of the global economy, financial system and international governance caused by stablecoins and to concludes the existing coping strategies' practical experience and challenges. This research will use a literature analysis method, summarizing and analyzing the impact of stablecoins on the world from three dimensions of financial sovereignty and illegal financial activities, individuals' rights protection and monetary policy. Moreover, making a conclusion of an existing supervising framework and practical technology's coping experience and shortage, and then sorting out the possible realistic challenges and their corresponding breakthrough direction.

Keywords: Stablecoin, Financial Sovereignty, Illegal Financial Activities, Individuals' Rights

1 Introduction

With the accelerating digitalization in today's global finance, the change of currency demonstrates the technological progress and institutional innovation in one stage after another, cryptocurrency, driven by blockchain technology, has already become a significant direction of digital currency's future development. However, stablecoins as a cryptocurrency aiming for the stability of value, their birth is not only inevitable but also an opportunity. Stablecoins have occupied a crucial position in the digital currency field.

After Dorian S. Nakamoto suggested the first cryptocurrency—bitcoin, its volume of business rises dramatically, more and more people devote themselves to the investment in the cryptocurrency space [1]. However, the supplement cannot ensure the stable value of bitcoins when its demand shrinks and the money leaves; after that, the bitcoin's value intensifies the decline. Stablecoins achieve the stable value and become the

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bridge that connects the encrypted world and traditional finance through making strict restrictions on theirpublication and requiring a binding between stablecoins and a reserve fund. Furthermore, stablecoins begin to challenge the 'solely stable carrier' position of legal tender, and have already replaced the function of legal tender in parts of people's lives with its features of both being anchored with legal tender and being globally available.

However, the rapid development of stablecoins also caused a series of problems and challenges: First of all, stablecoins have the risk of sovereign currency substitution and money laundering, and the probability of weakening the control power of currency issuance and circulation. At the same time, due to the features of stablecoins' anonymity and decentralization, the tracking and supervision of capital flow becomes more and more difficult. For instance, transferring funds abroad quickly, identifying the funds' track laboriously, and increasing the monitoring difficulty can all be done by using stablecoins. Moreover, because some parts of the programs lack transparency and accountability mechanisms, the consumers' rights protecting legal framework is still imperfect and a serious problem of centralization leads to the stablecoins' consumers facing multiple rights protection risks. In addition, uncontrolled monetary policy risk is easily caused by the quick improvement of stablecoins, which may shunt the bank deposit and affect the credit creation capability of commercial banks, and then interfere with the transmission mechanism of monetary policy. Meanwhile, if Stablecoin issuers centralize in minor nations or companies, these entities may achieve a large impact on the economy and politics, and even control the monetary policy.

This research uses 'the impact and measures of stablecoins to the world' as the research title, through sorting out the historical context and analyzing various dimensions' examples, systematically discuss the stablecoins' risks and influences to financial and economic system in the global range, and its corresponding solutions, and summarize its existing coping strategies' practical experience and challenges as well.

2 The Potential Risk of Stablecoins to Financial Stability

2.1 The Risk of Sovereign Currency Substitution and Money Laundering

Stablecoin, as a legal tender or digital currency that relies on other capital, its value is relatively stable and has little influence made by the cryptocurrency market's severe fluctuations. These features lead to the rapid popularization of stablecoin in the global range, but this brings financial sovereignty substitution at the same time. When the stablecoins are widely accepted and used in a specific area or groups, it may weaken the nation's control power to currency issuance and circulation. Especially in a country that is facing economic instability and serious currency devaluation, the residents in the nation may be more willing to use the stablecoins to carry on savings and transactions that will cause the demand for the nation's currency to decline and the monetary policy's transmission mechanism to be obstructed. This phenomenon in the nation with a high inflation rate is particularly obvious, such as Venezuela and Argentina, its local people have already begun to use stablecoins as a saving method, and then avoid their

own countries' currency depreciation risk [2]. Using Venezuela as an example, this nation faces hyperinflation year in year out, its price level continuously soaring, and its official currency bolivar, depreciates sharply. Because of the dramatic shrinking trend of the currency purchasing power, its residents' trust to the traditional financial system is decreasing and they begin to turn to stablecoins as a value-saving and paying tool. According to the World Bank's research, the number of Venezuela's family use stablecoins in their daily life have been over half, especially among the overseas remittance recipient group, the penetration rate is extremely high [3]. Similar situations have also occurred in Argentina, its economy has long been troubled by fiscal deficits and excessive currency, the inflation rate remains high, and the peso exchange rate against the US dollar continues to decline. Argentina's residents have lost confidence in local currency; meanwhile, the stablecoins that contain the features of both convenient trading and not subject to foreign exchange control restrictions lead to the rapid popularization in cross-border e-commerce payments and cross-border remittances scenarios. Local financial technology enterprise statistics show that the trading amount of stablecoins in Argentina appears a explosive growth recently, and parts of the small and micro enterprises in border provinces use stablecoins to settle more than 30% accounts [4].

More seriously, the anonymity and cross-border liquidity of stablecoins provide a new channel for money laundering and terrorist financing activities. To compare with the traditional financial system, the trading records of stablecoins are hard to monitor comprehensively, especially in the situation of decentralized exchange and privacy protection technology application, the track of fund flow becomes more difficult to trace. Some criminal uses stablecoins to carry on illegal fund transfer through bypassing the traditional financial regulatory system, which brings serious challenges to international anti-money laundering work. Financial Action Task Force has given warnings for several times, requiring for enhancement the anti-money laundering and counter-terrorism financing regulation of stablecoins. For example, the United States Department of the Treasury sanctioned the Tornado Cash agreement in 2022, accusing it of being used for money laundering activities, including the North Korean hacker organization Lazarus Group's fund transfer.

2.2 The Risk of Individuals' Rights Protection

There are several potential risks to the individuals' rights protection of stablecoin. Initially, lots of the stablecoin programs lack transparency and accountability mechanisms, making it difficult to verify whether issuers hold adequate reserve assets to support the issued stablecoins. The algorithmic stablecoin TerraUSD(UST) collapse event in 2022 was one of the most ordinary examples, leading to billions of dollars in market value evaporating and millions of investors suffering heavy losses, which exposed the stablecoin market's existing serious trust crisis. UST was originally designed to peg 1:1 to the US dollar as the algorithmic stablecoin through using a complicated accountability mechanism to maintain the value stability, but when the market confidence collapses, this kind of mechanism cannot maintain the hook, and then cause price plummet [5]. Moreover, the stablecoin consumers' rights legal framework is still imperfect. In a majority of the jurisdictions, the stablecoin issuers are not subject to the same regulatory

requirements as traditional financial institutions, so that the consumers' funds safety lack legal protection. When some problems occur in the stablecoin program, consumers always face the recoupment difficulty. For instance, in the TerraUSD collapse event, investors hardly recovered losses through legal means. In addition, the technology risks like stablecoins, smart contract vulnerabilities and hacker attacks bring a threat to the user asset safety belt. According to the statistics, in the 2023 global cryptocurrency losses caused by hackers' attacks, the related attacks of stablecoin account for over 30% illustrates that this field is facing serious safety challenge. For instance, Ronin Network was attacked by hackers in 2022, which lost around 625 million US dollars and mostly are stablecoins [6].

Besides, many stablecoin programs face serious centralization issues that contradict their decentralized promotion. Some stablecoin issuers are controlled by minority entities in nature, the management of reserve assets lacks transparency, and also the consumers cannot verify its authenticity and security. This centralized risk in a crisis moment is especially prominent, when the market occurs panic, the issuers may not be able to fulfill their commitments, resulting in user losses [7].

2.3 The Risk of Uncontrolled Monetary Policy

The wide range of use of stablecoins may cause a negative influence to the implementation effect of the nation's monetary policy. When stablecoins in economic entity widely available, it may divert bank deposits and affect the credit creation capability of the commercial bank, and then disturb the transmission mechanism of monetary policy. Especially in the aspect of interest rate policy, if the yield rate of stablecoins is higher than the bank deposit interest rate, it may cause a large-scale flow of funds from the banking system to the stablecoin market and weaken the central bank's capability to influence the economy by adjusting interest rates. Federal Reserve Chairman Powell warned multiple times previously, stablecoins might disturb monetary policy transmission and affect the financial stability [8].

When it comes to small open economies, stablecoins might become the real 'shadow currency', and affect the independence of domestic monetary policy. When the nation's currency is unstable, residents and enterprises may transfer to use foreign stablecoins to carry on transactions and stored value causing the domestic currency's demand to decline and intensifying exchange rate fluctuations. This situation is particularly obvious in a nation with a high inflation rate or a fragile monetary system. For instance, in Turkey, since the lira exchange rate fluctuates violently, parts of some residents begin to use USD stablecoin to carry on stored value and transactions, and also weaken the effect of the monetary policy of Turkey's central bank [9].

However, if the stablecoin issuers are center at the hands of a few countries or companies, these entities may gain a huge influence in both economy and politics, and even control the monetary policy. This 'digital dollarization' risk may lead to the loss of countries' currency sovereignty and have a profound effect on the global economic governance system. Some economists warn that if allow stablecoins to develop in disorder, it may form a new 'digital colonialism', causing developing countries to face larger economic dependency risk.

3 Response Strategies and Policy Practices

3.1 Regarding the Risk of Sovereign Currency Substitution and Money Laundering

In order to mitigate the risk of sovereign currency substitution and money laundering that may be caused by stablecoins, the international society and main economic entities have already constructed a regulatory framework that centers around legal regulation, license management, cross-border collaboration, and technological monitoring step by step. In the aspects of sovereign currency substitution, regions such as the United States and the European Union clarify the stablecoins' legal attributes through legislation and incorporate it into the financial regulatory system, preventing it from the impulsion of the legal tender's status and monetary policy transmission mechanism. For instance, US Treasury Department, Federal Reserve, and Financial Crime Enforcement Network consider stablecoins issuance and trading as licensed money service businesses, require related subject comply with Bank Secrecy Act, and carry out strict Know Your Customer and anti-money laundering procedures, and also make clear requirements to the stablecoin issuers' transparency of reserve assets [10]. The European Union carries out license management for electronic currency tokens linked to fiat currency through Markets in Crypto-Assets Regulation, which limits the disorderly circulation in the eurozone and protects the status of euro as the sovereign currency. In addition, to decrease the social dependence to stablecoins, many countries accelerate the research of sovereign digital currency, such as the Digital Currency Electronic Payment（e-CNY）, the EU's digital euro program and the Federal Reserve's digital dollar research to strength the monetary sovereignty and policy controllability.

In the aspect of the risk of money laundering and illegal financial activity, international organization and each country's regulatory agencies continuously strengthen monitoring and regulation of stablecoin trading activities. Financial Action Task Force on Money Laundering includes stablecoins in the regulatory scope of virtual assets, requires related trade to follow risk-based anti-money laundering or counter-terrorism financing principles, and implements identity recognition and transaction tracking requirements, including travel rules. Office of Foreign Assets Control sanctions imposed on the decentralized agreement Tornado Cash, accusing it is used for money laundering and illegal fund transfers supporting hacker organizations, that shows stablecoins new supervising challenge in the background of anonymity and cross border circulation. Meanwhile, the regulatory agencies cooperate with legal technology enterprises by using chain data analysis tools to strengthen monitoring of suspicious transactions and construct a comprehensive prevention and control system covering on chain and off chain, domestic and cross-border, to cope with the risk of money laundering and terrorist financing that stablecoins bring.

3.2 Regarding the Risk of User Rights and Interest Protection

Regarding the risk of user rights and interest protection that stablecoins bring, international society and research organizations have already constructed a collaborative governance framework through various dimensions such as legal regulations, technical standards, information disclosure, and governance constraints. The Bank for International Settlements pointed out that the stablecoin consumers are facing triple risks of opaque reserves, technical vulnerabilities, and centralized control suggesting to require issuers regularly release independently audited reserve asset reports through legislative regulation and clarify its anchoring ratio and liquidity structure with fiat currency to prevent the collapse event that is similar with the TerraUSD event caused by algorithm ineffectiveness. The Financial Stability Board further emphasizes that the regulatory framework needs to force the stablecoin project proponents to conduct third-party security audits on smart contracts, focus on investigating high-risk vulnerabilities such as re-entry attacks and integer overflow, and construct vulnerability bounty mechanism and multi signature wallet management rules to decrease the risk of the hackers' attack and private key leakage——in the global cryptocurrency related attack in 2023, over 30% relate to stablecoins, which shows the urgency of technical protection. International Organization of Securities Commissions proposed in its regulatory principles that the stablecoin issuers must publicly disclose governance structure, actual controller information, and decision-making process to prevent the moral hazard hidden under the cover of 'pseudo decentralization' and make sure consumers can use their redemption rights by clarifying the path when the market panic happens. Based on the case study of TerraUSD, the Financial Research Institute of the People's Bank of China pointed out that algorithmic stablecoins lack capital adequacy constraints and investor protection mechanisms, which can easily lead to trust crises, and they suggest to set minimum capital requirements for issuers and priority repayment rules for user funds and strength the legal remedies channels. These academic research and policy suggestions jointly indicate the current coping measures are being strengthened from multiple dimensions of 'asset transparency - technical security - governance norms' by pre regulation design (such as audit requirements, capital constraints) and process monitoring (such as vulnerability monitoring, information disclosure), systematically protect the consumers' rights are protected from algorithm defects, hacker attacks, and centralized abuse.

3.3 Regarding the Risk of Monetary Policy Being out of Control.

Regarding the risk of monetary policy losing control that may be caused by stablecoins, each country's regulatory agencies and international organizations have already constructed multi-level defense system from different aspects, such as limiting stablecoin flow range, strengthening the maintenance of monetary sovereignty, and standardizing the power of issuing entities. The People's Bank of China pointed out in the China Financial Stability Report that the wide flowing range of stablecoins may divert bank deposits, affect the commercial bank credit creation capability and disturb the transmission mechanism of monetary policy, especially when the stablecoins yield higher than bank deposit rates that may cause the funds flow from the bank system to stablecoin

market, and weaken the central bank's capability of impacting the economy through interest rate adjustments, to cope with this issue, related institutions should closely monitor its potential impact on financial stability. The report released by the Bank for International Settlements in 2021 emphasizes that if the stablecoin issuers concentrate in the hands of minority countries or companies, they may gain inappropriate economic and political influence, and even manipulation of monetary policy, and also easily form a risk of 'digital dollarization'. The Bank for International Settlements suggests limiting cross-border circulation of over-sovereign stablecoins through international regulatory cooperation, and carrying out penetrating supervision of issuers' reserve assets and governance structure, avoiding the developing countries' trap in the trap of 'digital colonialism' because of too much dependence on exterior stablecoins. The research group of the Monetary Policy Department of the People's Bank of China published a research paper in China's Money Market pointed out that the disorder developing trend of stablecoins may affect the effectiveness of domestic monetary policy through the ways such as diverting funds from banking system, disturbing the interest rate transmission channels, therefore, they advise to strength the supervising early warning of cross-border flow of stablecoins, improve the macro prudential management framework and focus on preventing its impact on traditional monetary policy.

4 Conclusion

The appearance of stablecoins is not only the inevitable product of digital economic development, but also a serious challenge to the traditional financial regulatory system. On the one hand, there is a risk of sovereign currency substitution and money laundering caused by the stablecoins, which impedes the circulation of sovereign currencies in developing countries to some extent, and also its anonymity and cross-border liquidity provide a new track to the illegal financial activities, money laundering and terrorist financing activities. On the other hand, the consumers' rights protection is also facing triple risk: the inadequate transparency of program and the loss of accountability mechanism leads to the funds' capital in doubt, the legal regulatory framework's imperfect strengthens the difficulties of rights protection and the funds' safety that causes by technical issues such as vulnerabilities in smart contracts. In addition, the wide range use of stablecoins may divert bank deposits, disturb monetary policy transmission and even cause 'digital dollarization' triggered by concentrated issuance that seriously weakens the nation's currency sovereignty.

The regulatory of stablecoins faces triple realistic challenges: the technology feature and the supervising capability have a fundamental misalignment, its decentralized and anonymity features and the application of cross chain technology and privacy tools strengthen the difficulty of tracking the flow of funds, and also the chain analysis tool cannot cope with the regulatory requirements of high-frequency and complex trading networks in these times; The contradiction between global coordination and local interests is prominent and various countries have fragmentation of regulatory standards, like Markets in Crypto-Assets Regulation emphasized high-standard compliance, the United States adopted a segmented regulatory model and the developing countries are

facing the dilemma of inadequate technology capability and transferring financial sovereignty that result in the rising compliance costs for market participants, and 'regulatory arbitrage' behavior weakens overall effectiveness; systematically risk and responsibility attribution vagueness, the on chain operation mode makes the boundary of traditional financial risk responsibility unclear and the UST collapse and other events expose the lack of legal remedies, and also the effect of monetary policy causing by stablecoins lacks the international consensus on quantitative evaluation and responsibility allocation. In the future, breakthroughs can be made in three aspects: initially, achieving dynamic adaptation, constructing an artificial intelligence real-time risk supervising system, and "regulatory node" mode and enhancing supervising efficiency through technology innovation. Moreover, carrying out tiered governance and differentiated supervision of the risk level according to payment and securities, and also requiring reserve custody, information disclosure, and establishing risk mitigation funds. Furthermore, deepening the international cooperation, establishing short-term reliance on the Financial Stability Board and Group of Twenty to promote the implementation of minimum standards, establishing long-term exploration cross-country regulatory alliance, and also developing countries actively participating in rule-making to avoid governance imbalances. Only if combining technical resilience, institutional flexibility, and deep international cooperation can it not only release the digital financial bonus but also strengthen the defense line of financial stability and promote the global economy to a more inclusive and sustainable future.

References

1. Xie, J. N.: Is the father of Bitcoin "Satoshi Nakamoto" appearing? Flawed!. Internet Weekly **6**(10), 14-15 (2016)
2. Zhou, J. H.: The impact of stablecoins on monetary policy transmission mechanism and countermeasures. Financial Research **2**(5), 45-58 (2022)
3. Huang, T., Chen, Z. X.: The legal qualification dilemma and regulatory path selection of stablecoins. Law Review **12**(4), 102-115 (2022)
4. Powell, J.: Monetary policy and financial stability: the challenge of stablecoins. The Federal Reserve System, Washington (2022)
5. Li, Y., Zhang, X. J.: Digital currency and the reconstruction of the international monetary system: China's response. Economic Research Journal **11**(2), 112-125 (2023)
6. Stiglitz, J. E.: The digital dollarization trap: how stablecoins could undermine developing economies. Harvard International Review **43**(2), 18-21 (2021)
7. Zhou, F.: The trend of digital finance: unveiling the multidimensional network of cryptocurrency risk propagation. Applied Economics **57**(38), 5924-5941 (2025)
8. Amirzadeh, R., Thiruvady, D., Nazari, A., et al.: Dynamic Bayesian Networks for Predicting Cryptocurrency Price Directions: Uncovering Causal Relationships. Annals of Data Science **22**(12), 1-31 (2025)
9. Baeckström, Y., Jalan, A., Matkovskyy, R., et al.: The Influence of Ethical, Sustainable, and Environmental Beliefs on Individual Cryptocurrency Participation in Denmark, Finland, and Sweden. Journal of Business Ethics **12**(06), 1-27 (2025)

10. Emmanuel, T. J., Onwe, C. J., Nweke, J. C., et al.: Understanding the drivers of cryptocurrency adoption: insights from the push-pull-mooring theory framework. Quality & Quantity **46**(12), 1-23 (2025)